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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
SHAY, DAVID M	
ART UNIT	PAPER NUMBER
3739	

DATE MAILED: 11/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)
09/982,482	Truckaistil
Examiner	Group Art Unit
[signature]	3739

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE — 3 — MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication .
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

☑ Responsive to communication(s) filed on July 22, 2004.

☑ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle,* 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

☑ Claim(s) 1-14, 21, 23-48 is/are pending in the application.

Of the above claim(s)_____ is/are withdrawn from consideration.

☐ Claim(s)_____ is/are allowed.

☑ Claim(s) 1-14, 21, 23-48 is/are rejected.

☐ Claim(s)_____ is/are objected to.

☐ Claim(s)_____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The proposed drawing correction, filed on_____ is ☐ approved ☐ disapproved.

☐ The drawing(s) filed on_____ is/are objected to by the Examiner.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 11 9(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number)_____.

☐ received in this national stage application from the International Bureau (PCT Rule 1 7.2(a)).

*Certified copies not received:_____

Attachment(s)

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s)._____

☐ Interview Summary, PTO-413

☐ Notice of Reference(s) Cited, PTO-892

☐ Notice of Informal Patent Application, PTO-152

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Other_____

Office Action Summary

Applicant's arguments have been fully considered but are not convincing for the reasons set forth below.

Applicant argues that Yates does not satisfy the language of claim 1, apparently because the disclosed usage of the PTC material of Yates is a "heating element." Applicant theorizes that because the PTC material of Yates is a heating element, it "must generally have a high resistance." The examiner takes issue with this musing of applicant. The following are fundamental facts of physics, of which the examiner takes official notice. Electric current generally is the flow of electrons across potential (voltage) gradient. When this flow occurs in a material, the electrons encounter the atoms or molecules making up the material yielding some of their kinetic energy to the atoms or molecules of the material, this increase in kinetic energy of the material is measured as an increase in temperature, or heating of the material through which the current flows. The actual measure of current is the time rate of charge of the charge in a given cross section also written: dQ/dt with Q representing the quantity of charge, which the electrons carry. The amount of kinetic energy transferred to the atoms or molecules with therefore be greater if a larger number of electrons is flowing. Ohm's law expresses the relationship between current, voltage and resistance and is commonly written V= IR. The foregoing is consistent with the teaching of Yates ('366) because in response to heating being too great, the resistance (R in Ohm's law) increases, which must result in a decrease in the current for the given voltage (see Yates (3'366) column 3, line 6 to column 4, line 9). Since the Yates device is intended to heat tissue, this would be done most effectively if the heater element were a low resistance. Thus, as applicant's musings regarding a high resistance material, absent any basis in Yates ('366) (and the examiner has found none), are merely unsupported conclusions

and as such are not convincing. Given that the heating of Yates ('366) is a low resistance material as reasoned by the examiner and supported by the teaching of Yates ('366), and as the heating element is surrounded by e.g. aluminum. (see Yates ('366) column 3, lines 54-57) there are clearly low resistance paths through the tissue. Since human tissue has a non-infinite resistance, some current must flow therethrough and in flowing, heat ohmicly the tissue to some degree by the mechanism set forth above.

Regarding the rejection based on Panescu, applicant argues that Panescu has not taught that the "materials should have a resistance when varies in response to changes in temperature." This argument fails for a number of reasons. Firstly, Panescu discloses the precise composition which is are one of those applicant employs as a positive temperature coefficient material (see the instant specification, paragraph [0073] for example), applicant has discussed no further treatment or process required to enable his compound to be have in the claimed manner, thus the identical compound of Panescu must also behave in this manner. Secondly, even assuming there were evidence of record to bolster applicants unsupported allegations that the claimed behavior is not inherent in the silicon material of Panescu et al and Pacific Silk, there is no requirement in claim 1, for example, that the solid material be the material responsible for the temperature varying resistance, merely that the body which exhibits the behavior include a solid material. Thirdly, the saline – silicon body of Panescu et al will exhibit expansion or contraction due to changes in temperature of the saline and the resultant stretching or relaxing of the saline envelope will cause the resistance thereof to change. Similarly, sufficient pressure will deform the balloon, both stretching the surface thereof and changing the distance between and therefore the volume of saline and therefore the resistance between the center conductor and the tissue-contacting

surface. Thus the prior art has been explained within the guidelines set forth in Zurko, and a prima facia case of anticipation has been clearly established. Thus applicant's arguments are not convincing.

Regarding the combination including Swanson, clearly both the multiple electrode (see elements 44 of figure 4 in Swanson et al) and spatially separated regions of the electrode of e.g. Figure 2 of Swanson et al constitute "multiple low resistance electrode current paths within the broadest reasonable interpretation of that phrase.

Regarding the rejection based on the combination including Yamada et al applicant alleges that no motivation has been supplied for the combination. The examiner firstly notes that Giller et al is merely employed to sow an alternate terminology for the claimed material which alternate terminology is used by Yamada et al, and as such needs no motivation for combination. Yamada et al teach that the claimed compound can form thermistors. As already stated in the rejection Panescu discloses the use of thermistors on the device, but does not discuss the composition thereof. This is considered sufficient motivation to employ the material of Yamada et al. If applicant feels this is not a sufficient motivation, and the examiner maintains it is, one having ordinary skill in the art would be additionally motivated to employ the thermistor of Yamada et al due to its wide range.

Regarding the combination including Takehana et al, the examiner regards that portion of the endoscope with the bend determination sensors as part of the working end of the device, which, with the electrosurgical device of Jones et al, reads on applicant's claim 48.

The rejections set forth in the previous office action are hereby repeated.

Claims 1, 2, and 7 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Yates ('366).

Thermally variable resistive material 39 is interior of thermal conductor 56, which is part of tissue engaging surface 33 (see column 3, lines 44-59 and Figure 16).

Claims 1-7, 9-18, 21, 23, 24, 26, 27, 29-45 and 47 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Panescu et al in view of Picha and Pacific Silk.

Panescu et al teaches a device such as claimed, including a tissue-contacting surface (elements 24) and a supporting body, which can be made from silicone rubber (see element 22, column 8, lines 1-22 and lines 50-55) and can be impregnated with a conductive material (see e.g. column 19, lines 5-16). Picha teaches that silicone belongs to a larger class of silicone compounds known as silicone polymers (see column 4, lines 15-16) and Pacific Silk teaches that silicone rubber, with a resistivity as taught by TABLE 3 of Panescu et al (see column 19) has a carbon density of about 12%, which is in the range disclosed by applicant (see the instant disclosure, page 17, first full sentence). Thus the references to Picha and Pacific Silk highlight the inherency of the claimed behaviors in the material disclosed by Panescu et al.

Claims 21 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swanson in combination with Swanson et al. Swanson teaches a device such as claimed, but does not teach the use of foam. Swanson et al teach a device as claimed except for the use of carbon particles. It would have been obvious to the artisan of ordinary skill to employ carbon in the foamed polymeric matrix of Swanson et al since the doped and undoped polymers can be employed equivalently, as taught by Swanson, or to use a foam in the device of Swanson since

foamed and non foamed polymers are equivalents, as taught by Swanson et al, thus producing a device such as claimed.

Claims 8,21, and 28 are rejected under U.S.C. 103(a) as being unpatentable over Panescu et al in combination with Yamada et al and Gillet et al. Panescu et al teach the use of thermistors. Yamada et al teach that thermistors can be compound of zirconia. Giller et al show that zirconia is zirconium oxide. It would have been obvious to the artisan of ordinary skill to a thermistor as taught by Yamada et al, since Panescu et al teach no particular thermistor material, thus producing a device such as claimed.

Claims 45 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Panescua et al in combination with Swanson. Panescu et al teach a device such as claimed except for the use of DC. Swanson teaches the equivalence of AC and DC as tissue affecting energy. It would have been obvious to the artisan of ordinary skill to employ DC rather than SC in the device of Panescu et al, since these are equivalents, thus producing a device such as claimed.

Claim 48 is rejected under U.S. C. 103(a) as being unpatentable over Jones et al in combination with Takehana et al. Jones et al teach an electrosurgical probe that is used with an endoscopic. Takehana et al teach endoscopes using a pressure sensitive conductive ink to control the bending thereof. It would have been obvious to the artisan of ordinary skill to employ the device of Jones et al with the endoscopes of Takehana et al, since the device of Jones is intended with a variety of endoscopes, or to employ the pressure sensitive ink and bending mechanism of Takehana in the device of Jones et al, since this would radically simplify the mechanism of Jones et al, thus producing a device such as claimed.

Applicant's arguments filed July 19, 2004 have been fully considered but they are not persuasive. The arguments are not convincing for the reasons set forth above.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication should be directed to David Shay at telephone number (703) 308-2215.

DAVID M. SHAY
PRIMARY EXAMINER
GROUP 330